

REMARKS

Claims 1-67 remain in the application for consideration. In view of the following remarks amendments and/or remarks, Applicant respectfully requests that the application be forwarded onto issuance.

The Claim Rejections

Claims 1-7, 10, 13-18, 20, 23-28, 32-36, 45-55, 58-61, and 66 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,401,051 to Merriam in view of U.S. Patent No. 5,539,922 to Wang.

Claims 8-9, 11-12, 19, 21-22, 29-31, 37-44, 56-57, 62-65 and 67 stand rejected under 35 U.S.C. §103(a) as being obvious over to Merriam in view of Wang and U.S. Patent No. 6,088,717 to Reed et al. (hereinafter "Reed").

Before undertaking a discussion of the substance of the Office's rejections, the following discussion of the §103 Standard, as well as the references to Merriam and Wang is provided.

Response to Office's Response to Arguments

In the present Office action, the Office maintains its position with respect to the combination of Merriam and Wang. The Office states in its "Response to Arguments" section that "[i]n this case, it would have been obvious ... to employ the hierarchical tree structure of nodes taught by Wang in order to provide a method of linking root nodes of various trees and for the advantage of efficiently locating the precise location of a portable device in a hierarchical tree structure of nodes." Further, the Office states that a person of skill would have readily recognized the desirability and advantage of modifying Merriam by employing

1 Wang's system in order to provide a method of linking root nodes of various trees
2 in a hierarchical tree structure and for the advantage of locating efficiently and
3 more precisely the current location of a portable device in a point of space on the
4 earth.

5 Applicant disagrees and respectfully submits that the Office's attempted
6 combination and rationale is misplaced and legally inappropriate for a couple of
7 different reasons. First, from a purely substantive standpoint, the combination of
8 these references does not make sense. Second, the stated motivation (i.e. "locating
9 efficiently and more precisely the current location of a portable device...") is so
10 general so as to cover any alteration of Merriam.

11 To support the conclusion that the claimed invention is directed to obvious
12 subject matter, either the references must expressly or impliedly suggest the
13 claimed invention or the examiner must present a convincing line of reasoning as
14 to why the artisan would have found the claimed invention to have been obvious
15 in light of the teachings of the references. See, e.g. *Ex parte Clapp*, 227 USPQ
16 972, 973 (Bd. Pat. App. & Inter. 1985). In the present case, the Office's attempt at
17 a "convincing line of reasoning" is to state simply state that determining location
18 would be more efficient and precise. As the Office surely appreciates, particular
19 findings must be made as to the *reason* the skilled artisan, *with no knowledge of*
20 *the claimed invention*, would have selected these components for combination in
21 the manner claimed. *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317
22 (Fed. Cir. 2000).

23 Applicant respectfully submits that the Office has not made particular
24 findings as to the reason the claimed subject matter would be obvious in view of
25 the cited references. Simply stating that the combination would make location

1 determination more precise and efficient does not rise to the level of a particular
2 finding.

3 Additionally, and as an aside, the Office has provided a paper, available at
4 the following link:

5 <http://www.uspto.gov/web/menu/busmethp/busmeth103rej.htm>

6
7 that describes proper and improper rejections made under §103(a).
8 Particularly instructive are Examples 17 and 18 that appear in Section V of the
9 paper illustrating improper §103(a) rejections which are based, respectively, upon
10 hindsight in view of a general motivation statement and a proposed motivation that
11 is contrary to the stated purpose of the reference. These examples are reproduced
12 below in their entireties for the Office's convenience:

13 **V. Examples of Improper Rejection under 35 U.S.C. 103**

14 Example 17: Improper rejection based upon hindsight - general 15 motivation statement.

16 **a. The claimed invention**

17
18 The invention is drawn to a smart card containing a tracking
19 mechanism, which tracks shopping preferences of consumers by recording
20 the type, quantity, and dates of purchase for a pre-selected group of
21 products. The smart card is useful in a system and method for introducing
22 new and alternative products that are of the same type as products normally
23 purchased by the shopper. The smart card records the shopper's purchases
24 and submits an automatic notification to the shopper when a quantity
threshold is achieved for the pre-selected products. This notification will
encourage the consumer to consider alternative products by providing the
consumer incentives, such as a pricing discount, to purchase an alternative
product.

25 Claim 1:

1 A method for using a smart card in a marketing analysis program designed
2 to introduce new products, the method comprising the steps of:

3 storing product information on the smart card when said products
4 are purchased by a consumer wherein said information including type,
quantity and dates of the product purchased;

5 identifying for each product a threshold for each of said type,
6 quantity and dates of products purchased;

7 determining an incentive for an alternative product based on said
8 threshold; and

9 automatically notifying said consumer when said threshold is
10 reached for a given product identified on the smart card and providing the
consumer with said incentive, whereby the incentive encourages the
consumer to consider alternative products.

11 **b. Evidence**

12 Reference A discloses smart card that tracks consumer preferences by
13 recording the type, quantity, and dates of purchase of pre-selected products to
determine trends in consumer purchases. The smart card is periodically read by a
14 scanner to determine its contents for market analysis. In return for using the smart
card and participating in the marketing program, the user is provided with free
15 product coupons for products that are normally purchased by the shopper.

16 Reference B discloses a traditional consumer incentive program that
17 provides coupons for the purchase of named products based upon the consumer's
purchase of those same products to promote customer loyalty.

18 **c. Poor statement of the rejection**

19 Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over
Reference A in view of Reference B. Reference A discloses the
20 conventional use of a smart card to track consumer preferences and provide
incentives. However, Reference A does not disclose the automatic
21 notification to consumer providing incentives. Reference B discloses
providing incentives to consumers to purchase the desired products. *It*
22 *would have been obvious to combine Reference A's smart card with*
23 *Reference B's incentive to consumers because the combination would*
allow Reference A's smart card to be more efficient.
24

25 **d. Analysis**

1 *The motivation, improve efficiency, is too general because it could cover*
2 *almost any alteration contemplated of Reference A and does not address why*
3 *this specific proposed modification would have been obvious.* Additionally,
4 there is nothing in either of references that would suggest automatically notifying
5 the consumer when reaching a threshold nor is there anything in either reference
6 that would suggest the notifying step. Finally, although Reference B teaches a
7 traditional coupon scheme to promote customer loyalty, there is no suggestion,
8 other than applicant's disclosure, to employ this scheme to promote the
9 introduction of new and alternative products. **The rejection is improper.**

10 Example 18: Improper rejection based upon hindsight - proposed
11 motivation contrary to the stated purpose of the reference.

12 **a. The claimed invention**

13 The claim recites a smart card containing a tracking mechanism which
14 tracks shopping preferences of consumers including the type and quantity
15 of products purchased as well as the time interval over which the purchases
16 are made by the consumer. Additionally, after a predefined start-up period,
17 an automatic notification to the consumer is provided when a particular
18 product would normally be purchased by the consumer. This notification
19 will encourage the consumer to consider same product by providing the
20 consumer incentives to purchase the product, including substantial price
21 reductions which vary on a periodic basis, thereby increasing sales and
22 product loyalty.

23 Claim 1:

24 A method for using a smart card in a marketing analysis program, the
25 method comprising the steps of:

 storing a product information on the smart card when said products
 are purchased by a consumer wherein said information including type,
 quantity and dates of the product purchased;

 identifying a threshold for each of said type, quantity and dates
 of products purchased;

 determining an incentive for each purchased product based on said
 threshold; and

 automatically notifying said consumer when said threshold is
 reached for the same type of product identified on the smart card and

1 providing the consumer with said incentive, whereby the incentive
2 encourages the consumer to purchase the same product to increase sales
3 and product loyalty.

4 **b. Evidence**

5 Reference A discloses smart card that tracks consumer preferences by
6 recording the type, quantity, and dates of purchase of pre-selected products to
7 determine trends in consumer purchases and the potential for offering new
8 products to certain shoppers. The smart card is periodically read by a scanner to
9 determine its contents for market analysis. In return for using the smart card and
10 participating in the marketing program, the user is provided with free product
11 coupons for new and alternative products that are of the same type as the products
12 normally purchased by the shopper.

13 Reference B discloses a traditional consumer incentive program that
14 provides coupons for the purchase of named products based upon the consumer's
15 purchase of those same products to promote customer loyalty.

16 **c. Poor statement of the rejection**

17 Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over
18 Reference A in view of Reference B. Reference A discloses the use of a smart
19 card to track consumer preferences and determine what new products might be of
20 interest to the consumer. However, Reference A does not disclose the automatic
21 notification to consumer providing incentives. Reference B discloses providing
22 incentives, such as coupons, to consumers to purchase the desired products. It
23 would have been obvious to combine Reference A's smart card with Reference
24 B's incentive to consumers because the combination would allow Reference A's
25 smart card to increase sales of the desired product.

26 **d. Analysis**

27 The motivation is not sound because *there is nothing in either of*
28 *references that would suggest that the motivation for combining the references*
29 *is known outside of applicant's disclosure.* Additionally, there is nothing in the
30 references that would suggest incorporating the claimed notifying step with the
31 smart card. Further, the proposed modification would destroy the intended
32 purpose of Reference A; providing a program to introduce new and alternative
33 products. **The rejection is improper.**

1 In the first example, the rejection attempted to at least provide a reason for
2 combining the references—even though that reason was too general, and did not
3 address *why* a specific proposed modification would have been obvious.

4 In the present rejection, the Office has not even stated a reason why the
5 claimed subject matter would be obvious other than for making location
6 determination more efficient and precise. As noted in the critique of Example 17,
7 “[t]he motivation, improve efficiency, is too general because it could cover almost
8 any alteration contemplated of Reference A and does not address why this specific
9 proposed modification would have been obvious.” The present rejection is no
10 different in spirit than the faulty rejection of this example. Additionally, as noted
11 in the critique of Example 18, “[t]he motivation is not sound because there is
12 nothing in either of the references that would suggest that the motivation for
13 combining the references is known outside of applicant’s disclosure.” The same
14 can be said of the Office’s attempted combination of Merriam and Wang. This is
15 even more so the case when one delves into the specifics of each of the references.

16 17 **The Merriam Reference**

18 Merriam discloses a method and apparatus for locating buried objects, such
19 as such as underground cables, prior to digging at a particular location. Merriam
20 instructs that a positioning device is taken to the location where digging is to take
21 place and receives positioning signals from one or more positioning stations.
22 Based upon the positioning signals, the positioning device determines its current
23 location and hence the location of the dig site. Once the current location is
24 determined, a registry database containing the locations of previously buried
25 objects is accessed. The registry database is queried for all locations within a

1 selected distance of the current location which have buried objects. If this query
2 returns no records, then Merriam instructs that it is probably safe to dig at the
3 current location. On the other hand, if the query returns one or more locations,
4 then Merriam instructs that further digging at the current location should either be
5 avoided or performed with great caution.

6 Merriam's Fig. 1 provides an illustration of its system, generally at 100.
7 There, system 100 comprises one or more positioning devices 102, a central
8 computer 104, and one or more positioning stations 106. Merriam instructs that
9 the positioning device 102 is the component that is taken to a dig site and that its
10 responsibility is to determine its own current location, and hence the current
11 location of the dig site. This determination is made based upon positioning signals
12 provided to the positioning device 102 by the positioning stations 106. Once the
13 current location is determined, the central computer 104 is consulted, via a
14 communications link 108, to determine whether there are any buried objects at or
15 near the current location. The central computer 104, which maintains a registry
16 database 110 of locations at which objects have been previously buried, makes this
17 determination by searching the database 110 for all locations within a certain
18 distance of the current location. Thereafter, the central computer 104 provides to
19 the positioning device 102, via the communications link 108, all of the locations
20 retrieved from the database 110. Based upon the location information received
21 from the central computer 104, the positioning device 102 provides to a user an
22 indication as to whether there are buried objects within relative close proximity to
23 the current location. This indication allows the user to determine whether he
24 should or should not dig at the current location.

The Wang Reference

Wang discloses communication systems for portable transceivers and methods and systems that trace the locations of portable transceivers.

Perhaps a good place to start a discussion of Wang is with its Fig. 1. There, Wang shows a hierarchical structure for a communication system 100. Wang instructs that covered area of the communication system 100 is organized into a hierarchical structure having several layers. The highest layer may be the earth 102 followed by country 104, state 106, area code 108, city 110, and the lowest layer (Layer 1) is a primary layer that comprises a plurality of independent paging regions (cells) 112. According to Wang, each region defines an area or location in which one may be paged. Each layer 1 cell comprises one or more base stations. Layer 1 may comprise a radio telephone communication system (e.g., Digital European Cordless Telephone).

As Wang instructs, each block in layers 2 through 6 (the secondary layers) is a communication service node representing a *switching station having computing and memory means* (i.e., all layers >1 are intelligent layers). The memory means (at each of the switching stations) comprises a database for tracking the location of customers (i.e., users of portable communication units that are registered in the system). Thus, what begins to emerge from a preliminary overview of Wang is a system in which transceivers are tracked by a number of geographically-separated switching stations, each with computing and memory means which includes a database to track customer locations.

The operation of Wang's system is probably best appreciated from its Fig. 5. There, Wang shows a diagram illustrating an example of how a customer or transceiver is traced via an address chain. In this example, an entity known as a

1 "called party" (unit 24) has a home address in cell 1,d, and a current address at cell
2 8,d. In a first case, the communication unit 20, located in cell 2,c, places a call to
3 communication unit 24. To do this, Wang instructs that the communication unit
4 20 dials the home address number of the called party. The calling party's
5 connection request is received by a base station at cell 2,c, and it is passed on to
6 the Boynton node in layer 2. That is, the connection request is passed on to a
7 different switching station with its own computing and memory means, as noted
8 above.

9 At the Boynton node, the corresponding database is searched for an entry
10 pertaining to the called party. In this case an entry is found in the database. The
11 entry contains the home address (HA) of the called party and an "OUT" indication
12 which indicates that the transceiver is outside of the covered region associated
13 with the Boynton node. This being the case, the call is then forwarded along the
14 address chain to the "407" node of layer 3, where the corresponding database also
15 contains the home address of the called party and an "OUT" indication which
16 indicates that the transceiver is outside of the covered region associated with the
17 "407" node. Thus, the connection request is further traced up through the Florida
18 node of layer 4, also indicating that the called party is "OUT". Then, in the U.S.A.
19 node of layer 5, with its associated computing and memory means (i.e. database),
20 indicates that the portable device 24 is in Georgia. The tracing then continues to
21 the Georgia node, where the area code "404" is indicated. Thereafter, the tracing
22 process continues to the "404" node, where "Atlanta" is indicated. Searching in
23 the Atlanta database reveals the location of the portable communication unit 24,
24 and the requested connection is made.
25

1 With respect to updating and maintaining all of the databases, Wang
2 instructs as follows. The database updating process is initiated by the portable
3 communication units. Each base station continuously transmits its subsystem
4 identification information. By monitoring this information from the surrounding
5 bases, an active portable communication unit is able to select a desired base station
6 (e.g., the strongest base) and lock on to it. Whenever a new strongest base station
7 is found, up to two messages may be transmitted to the associated bases to update
8 the address chains. The address of the base to which the portable communication
9 unit is locking is called the current address and the address of the base of the new
10 strongest base is called the new address.

11 12 **The Office's Attempted Combination of Merriam and Wang**

13 In attempting to combine Merriam and Wang, the Office argues that
14 Merriam discloses all recited features except for a hierarchical tree structure. The
15 Office then relies on Wang and argues that Wang discloses a communication
16 system with a hierarchical system of nodes organized into nodes trees. The Office
17 notes that Wang's hierarchical system is capable of tracking the location of a
18 transceiver as it moves between nodes of the tree structure.

19 Given these two references, the Office argues that their combination would
20 render the subject matter of many of the claims obvious. In support of its
21 argument, the Office argues that the skilled artisan would have readily recognized
22 the desirability and advantage of modifying Merriam by employing the system of
23 Wang in order to provide a method of linking root nodes of various trees and for
24 the advantage of efficiently tracking a device location in a hierarchical system.
25

1 Applicant again respectfully disagrees with the Office's combination and
2 its stated motivation to combine these references. As such, Applicant respectfully
3 submits that the Office has failed to establish a *prima facie* case of obviousness.

4 Consider, for example, the nature of Merriam's disclosure. Specifically,
5 Merriam teaches a system that utilizes a positioning device to receive positioning
6 signals so that the positioning device can determine its location. Once its location
7 is determined, the positioning device can ascertain whether it is safe to dig at the
8 particular location. Once this determination is made, the positioning device is
9 done and its user can conceivably move on to another location. The Office argues
10 that it would be obvious to employ Wang's hierarchical system in Merriam's
11 system to efficiently track Merriam's device.

12 Applicant respectfully submits that Merriam's system and method have no
13 need whatsoever for tracking its positioning device. That is, Merriam's
14 positioning device determines its current location and whether it is safe to dig at
15 that current location. When Merriam's positioning device is moved to a next
16 location, it is of no consequence whatsoever where the positioning device has been
17 in the past. The only thing that is of any consequence with respect to the next
18 location, is whether it is safe to dig at that next location. Accordingly, the
19 motivation to combine these references, i.e. to track Merriam's device, is
20 misplaced at best.

21 There appears to be no logical or technically meaningful reason for
22 Merriam's device to be tracked after it performs its function at a particular
23 location. In addition, there do not appear to be any inefficiencies associated with
24 Merriam's approach that would be mitigated by incorporating Wang's teachings
25

1 therein. Hence, the Office's rationale is misplaced and inappropriate. Applicant
2 will now address the specific rejections of the claims.

3 4 **The Claims**

5 **Claim 1** recites a computing device comprising:

- 6
- 7 • one or more processors;
- 8 • memory operably associated with the one or more processors; and
- 9 • a context service module loadable in the memory and executable by
10 the one or more processors to receive context information from one
11 or more context providers and process the information to determine
12 a current device context by determining, from the context
13 information, at least one node associated with the context
14 information and traversing at least a portion of a hierarchical tree
15 structure of which said at least one node comprises a part.

13 In making out the rejection of this claim, the Office argues that Merriam
14 discloses all recited features except for traversing a hierarchical tree structure of
15 which the recited node comprises a part. More specifically, the Office argues that
16 Merriam's dig site constitutes a "node" as that term is used in the claim. The
17 Office then relies on Wang and argues that Wang discloses a communication
18 system with a hierarchical system of nodes organized into nodes trees. The Office
19 notes that Wang's hierarchical system is capable of tracking the location of a
20 transceiver as it moves between nodes of the tree structure.

21 Given these two references, the Office argues that their combination would
22 render the subject matter of this claim obvious. In support of its argument, the
23 Office argues that the skilled artisan would have readily recognized the
24 desirability and advantage of modifying Merriam by employing the system of
25

1 Wang in order to provide a method of linking root nodes of various trees and for
2 the advantage of efficiently tracking a device location in a hierarchical system.

3 Applicant respectfully disagrees with the Office's combination and its
4 stated motivation to combine these references. As such, Applicant respectfully
5 submits that the Office has failed to establish a *prima facie* case of obviousness.

6 Consider, for example, the nature of Merriam's disclosure. Specifically,
7 Merriam teaches a system that utilizes a positioning device to receive positioning
8 signals so that the positioning device can determine its location. Once its location
9 is determined, the positioning device can ascertain whether it is safe to dig at the
10 particular location. Once this determination is made, the positioning device is
11 done and its user can conceivably move on to another location. The Office argues
12 that it would be obvious to employ Wang's hierarchical system in Merriam's
13 system to efficiently track Merriam's device.

14 Applicant respectfully submits that Merriam's system and method have no
15 need whatsoever for tracking its positioning device. That is, Merriam's
16 positioning device determines its current location and whether it is safe to dig at
17 that current location. When Merriam's positioning device is moved to a next
18 location, it is of no consequence whatsoever where the positioning device has been
19 in the past. The only thing that is of any consequence with respect to the next
20 location, is whether it is safe to dig at that next location. Accordingly, the
21 motivation to combine these references, i.e. to track Merriam's device, is
22 misplaced at best. As such, the Office has failed to establish a *prima facie* case of
23 obviousness and this claim is allowable.

24 **Claims 2-12** depend from claim 1 and are allowable as depending from an
25 allowable base claim. These claims are also allowable for their own recited

1 features which, in combination with those recited in claim 1, are neither disclosed
2 nor suggested in the references of record, either singly or in combination with one
3 another. In addition, given the allowability of these claims, the rejection of claims
4 8, 9, 11 and 12 over the further combination with Reed is not seen to add anything
5 of significance.

6 **Claim 13** recites a computing device comprising:

- 7
- 8 • one or more processors;
- 9 • memory operably associated with the one or more processors; and
- 10 • a location service module loadable in the memory and executable by
11 the one or more processors to receive location information from one
12 or more location providers and process the information to determine
13 a current device location by determining, from the location
14 information, at least one node associated with the location
15 information and traversing at least a portion of a hierarchical tree
16 structure of which said at least one node comprises a part.

17 In making out the rejection of this claim, the Office uses the same argument
18 and reasoning as it did in making out the rejection of claim 1 over Merriam and
19 Wang. As noted above, the Office has failed to establish a *prima facie* case of
20 obviousness because these references are not properly combinable. As such, this
21 claim is allowable.

22 **Claims 14-22** depend from claim 13 and are allowable as depending from
23 an allowable base claim. These claims are also allowable for their own recited
24 features which, in combination with those recited in claim 13, are neither disclosed
25 nor suggested in the references of record, either singly or in combination with one
another. In addition, given the allowability of these claims, the rejection of claims

1 19, 21 and 22 over the combination with Reed is not seen to add anything of
2 significance.

3 **Claim 23** recites a computing device comprising:

- 4
- 5 • one or more processors;
- 6 • one or more computer-readable media;
- 7 • *at least one hierarchical tree structure resident on the media and*
8 *comprising multiple nodes each of which represents a geographical*
9 *division of the Earth; and*
- 10 • a location service module loadable in the memory and executable by
11 the one or more processors to receive location information from one
12 or more location providers and *process the information to determine*
13 *a current device location that comprises a node of the hierarchical*
14 *tree structure.*

15 In making out the rejection of this claim, the Office uses the same argument
16 and reasoning as it did in making out the rejection of claim 1 over Merriam and
17 Wang. As noted above, the Office has failed to establish a *prima facie* case of
18 obviousness because these references are not properly combinable. As such, this
19 claim is allowable.

20 **Claims 24-31** depend from claim 23 and are allowable as depending from
21 an allowable base claim. These claims are also allowable for their own recited
22 features which, in combination with those recited in claim 23, are neither disclosed
23 nor suggested in the references of record, either singly or in combination with one
24 another. Given the allowability of claim 23, the rejection of claims 29-31 over the
25 further combination with Reed is not seen to add anything of significance.

Claim 32 recites a computing device comprising:

- one or more processors;
- one or more computer-readable media;

- *at least one hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a physical or logical entity; and*
- *a location service module loadable in the memory and executable by the one or more processors to receive location information from one or more location providers and process the information to determine a current device location that comprises a node of the hierarchical tree structure.*

In making out the rejection of this claim, the Office uses the same argument and reasoning as it did in making out the rejection of claim 1 over Merriam and Wang. As noted above, the Office has failed to establish a *prima facie* case of obviousness because these references are not properly combinable. As such, this claim is allowable.

Claims 33-36 depend from claim 32 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 32, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 37 recites a location-aware computing system comprising:

- one or more computing devices;
- each computing device having a software architecture comprising:
 - a location provider interface that is configured to receive location information;
 - a location service module communicatively associated with the location provider interface and configured to receive the location information from the multiple different location providers and process the information to ascertain a current device location by determining, from the location information, at least one node associated with the location information and traversing at least a portion of a hierarchical

tree structure of which said at least one node comprises a part;
and

- one or more application program interfaces (API) or events associated with the location service module and defining a mechanism through which information concerning a current device location can be provided to one or more applications that are configured to provide location-specific services.

In making out the rejection of this claim, the Office uses the same argument and reasoning as it did in making out the rejection of claim 1 over Merriam and Wang. As noted above, the Office has failed to establish a *prima facie* case of obviousness because these references are not properly combinable. As such, this claim is allowable. Given the allowability of this claim, the rejection over the combination with Reed is not seen to add anything of significance. Accordingly, for at least this reason, this claim is allowable.

Claims 38-44 depend from claim 37 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 37, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 45 recites a computer-implemented method of determining a computing device context comprising:

- receiving, with a computing device, information that pertains to a current context of the device;
- processing the information on and with the device to ascertain the current context of the computing device by determining, from the information, at least one node associated with the information and traversing at least a portion of a hierarchical tree structure of which said at least one node comprises a part.

1 In making out the rejection of this claim, the Office uses the same argument
2 and reasoning as it did in making out the rejection of claim 1 over Merriam and
3 Wang. As noted above, the Office has failed to establish a *prima facie* case of
4 obviousness because these references are not properly combinable. As such, this
5 claim is allowable.

6 **Claims 46-57** depend from claim 45 and are allowable as depending from
7 an allowable base claim. These claims are also allowable for their own recited
8 features which, in combination with those recited in claim 45, are neither disclosed
9 nor suggested in the references of record, either singly or in combination with one
10 another. Accordingly, for at least this reason, this claim is allowable. Given the
11 allowability of this claim, the rejection of claims 56 and 57 over the combination
12 with Reed is not seen to add anything of significance.

13 **Claim 58** recites one or more computer-readable media having computer-
14 readable instructions thereon which, when executed by a computing device, cause
15 the computing device to:

- 16 • receive information that pertains to a current location of the device,
17 the information being received from multiple different location
18 providers; and
- 19 • process the information to map the information to a node of a
20 hierarchical tree structure that comprises multiple nodes that
21 represent either (1) geographical divisions of the Earth or (2)
22 physical or logical entities; and
- 23 • traverse the hierarchical tree structure to ascertain the current device
24 location.

25 In making out the rejection of this claim, the Office uses the same argument
and reasoning as it did in making out the rejection of claim 1 over Merriam and

1 Wang. As noted above, the Office has failed to establish a *prima facie* case of
2 obviousness because these references are not properly combinable. As such, this
3 claim is allowable.

4 **Claim 59** recites a computer-implemented method of determining the
5 location of a hand-held, mobile computing device comprising:

- 6
- 7 • maintaining a hierarchical tree structure on the mobile computing
8 device, the tree structure comprising multiple nodes each of which
9 represent geographical divisions of the Earth;
- 10 • receiving information from multiple different location providers that
11 describe aspects of a current device location;
- 12 • processing the information with the mobile device to ascertain a
13 node on the tree structure that likely constitutes a current device
14 location; and
- 15 • traversing at least one other node of the tree structure to ascertain
16 additional location information that is associated with the current
17 device location.
- 18
- 19

14 In making out the rejection of this claim, the Office uses the same argument
15 and reasoning as it did in making out the rejection of claim 1 over Merriam and
16 Wang. As noted above, the Office has failed to establish a *prima facie* case of
17 obviousness because these references are not properly combinable. As such, this
18 claim is allowable.

19 **Claims 60-66** depend from claim 59 and are allowable as depending from
20 an allowable base claim. These claims are also allowable for their own recited
21 features which, in combination with those recited in claim 59, are neither disclosed
22 nor suggested in the references of record, either singly or in combination with one
23 another. In addition, given the allowability of this claim, the rejection of claims
24 62-65 over the combination with Reed is not seen to add anything of significance.
25

1 **Claim 67** recites one or more computer-readable media having computer-
2 readable instructions thereon which, when executed by a computing device, cause
3 the computing device to:

- 4 • maintain or access a hierarchical tree structure on or with the
5 computing device, the tree structure comprising multiple nodes each
6 of which represent geographical divisions of the Earth;
- 7 • receive information from multiple different location providers that
8 describe aspects of a current device location;
- 9 • process the information with the device to ascertain a node on the
10 tree structure that likely constitutes a current device location;
- 11 • traverse at least one other node of the tree structure to ascertain
12 additional location information that is associated with the current
13 device location;
- 14 • receive one or more calls from one or more applications for
15 information that pertains to a current device location, the
16 applications being configured to render location-specific
17 information; and
- 18 • supply at least some information that pertains to the current device
19 location to the one or more applications.

20 In making out the rejection of this claim, the Office uses the same argument
21 and reasoning as it did in making out the rejection of claim 1 over Merriam and
22 Wang. As noted above, the Office has failed to establish a *prima facie* case of
23 obviousness because these references are not properly combinable. As such, this
24 claim is allowable.
25

21 **Conclusion**

22 All of the claims are in condition for allowance. Accordingly, Applicant
23 requests a Notice of Allowability be issued forthwith. If the Office's next
24 anticipated action is to be anything other than issuance of a Notice of Allowability,
25

1 Applicant respectfully requests a telephone call for the purpose of discussing an
2 appeal.

3 Respectfully Submitted,

4
5 Dated: 10/2/09

6 By: 

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